

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gurer

Serial No:

Filed: June 4, 2001

For: PLASMA DEPOSITION OF SPIN CHUCKS
TO REDUCE CONTAMINATION OF
SILICON WAFERS

) Group No.:

) Examiner:

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Before examination, please consider the following amendments and remarks.

In the Claims:

Please cancel claims 1-44.

Please add the following new claims 45-64:

45. (New) An apparatus for delivering media to a wafer, comprising:
a housing defining a process chamber;
a media delivery member coupled to the process chamber;
a spin chuck positioned in the process chamber, the spin chuck having a wafer support surface, wherein the wafer support surface is covered with a coating layer, the coating layer being in a solid state and substantially free of voids; and
a vacuum supply line coupled to the spin chuck.

46. (New) The apparatus of claim 45, wherein the coating layer is a dielectric coating layer.

47. (New) The apparatus of claim 45, wherein the coating layer has a composition including a substance from the chemical family SiO_xCH_y , with x

3 ranging from 1-2, inclusive, and y ranging from 0-3, inclusive.

1 48. (New) The apparatus of claim 45, wherein the coating layer has a
2 composition including a substance from the chemical family $\text{SiO}_x\text{N}_a\text{H}_b$, with x
3 ranging from 1-2, inclusive, a ranging from 0-1, inclusive, and b ranging from 0-1,
4 inclusive.

1 49. (New) The apparatus of claim 45, wherein the coating layer has a
2 mechanical hardness less than a corresponding mechanical hardness of the wafer.

1 50. (New) The apparatus of claim 45, wherein the coating layer has a
2 mechanical hardness less than a mechanical hardness of silicon.

1 51. (New) The apparatus of claim 45, wherein the coating layer has a
2 thickness in the range of 10-100 micrometers.

1 52. (New) The apparatus of claim 45, wherein the coating layer has a
2 thickness in the range of 1-10 micrometers.

1 53. (New) The apparatus of claim 45, wherein the coating layer has a
2 thickness in the range of 0.05-1 micrometers.

1 54. (New) The apparatus of claim 45, wherein the coating material on the
2 wafer support surface has a thickness of 10-100 microns.

1 55. (New) The apparatus of claim 45, wherein the wafer support surface
2 has a surface area no larger than a surface area of a wafer configured to be
3 positioned on the wafer support surface.

1 56. (New) The apparatus of claim 45, wherein the wafer support surface
2 includes a plurality of support structures.

1 57. (New) The apparatus of claim 56, wherein the support structures are
2 point contact structures.

1 58. (New) The apparatus of claim 45, wherein the wafer support surface
2 includes a vacuum ring.

1 59. (New) The apparatus of claim 59, wherein the vacuum ring is a line
2 contact vacuum ring.

1 60. (New) An apparatus of claim 45, further comprising a skirt positioned
2 at a periphery and in a non-planar relationship to the wafer support wafer surface.

1 61. (New) The apparatus of claim 60, wherein the wafer support surface
2 provides a mechanical support for a wafer and the skirt is positioned to be in a non-
3 mechanical supporting position relative to the wafer.

1 62. (New) The apparatus of claim 60, wherein the skirt is sized to permit a
2 wafer positioned on the wafer support surface to extend beyond a periphery of the
3 skirt.

1 63. (New) The apparatus of claim 60, wherein the skirt and wafer support
2 surface are sized to be at least equal to a size of a wafer positioned on the wafer
3 support surface.

1 64. (New) The apparatus of claim 45, further comprising at least one
2 wafer transporter coupled to the process chamber.

CONCLUSION

Applicant makes the above amendments to put the claims in better condition for examination.

The Commissioner is authorized to charge Deposit Account No. 8003-391 for any fees due in connection with this paper.

Respectfully submitted,

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Date: 4 June, 2001


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gurer et al.

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For: Plasma Deposition of Spin Chucks to Reduce
Contamination of Silicon Wafers

Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL OF FORMAL DRAWING(S) TO CORRECT INFORMALITIES

SUBMISSION OF DRAWING(S)

To correct the informalities in the drawings, applicants submit herewith formal drawing(s) for this application.

Number of sheets of drawings submitted: 6

Respectfully submitted,

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CERTIFICATE OF MAILING (37 C.F.R. 1.8)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date: 4 - JUNE - 2001

Casey Hagopian

Transmittal of New Drawing(s) to Correct Informalities - Page 1)